0067-0070260

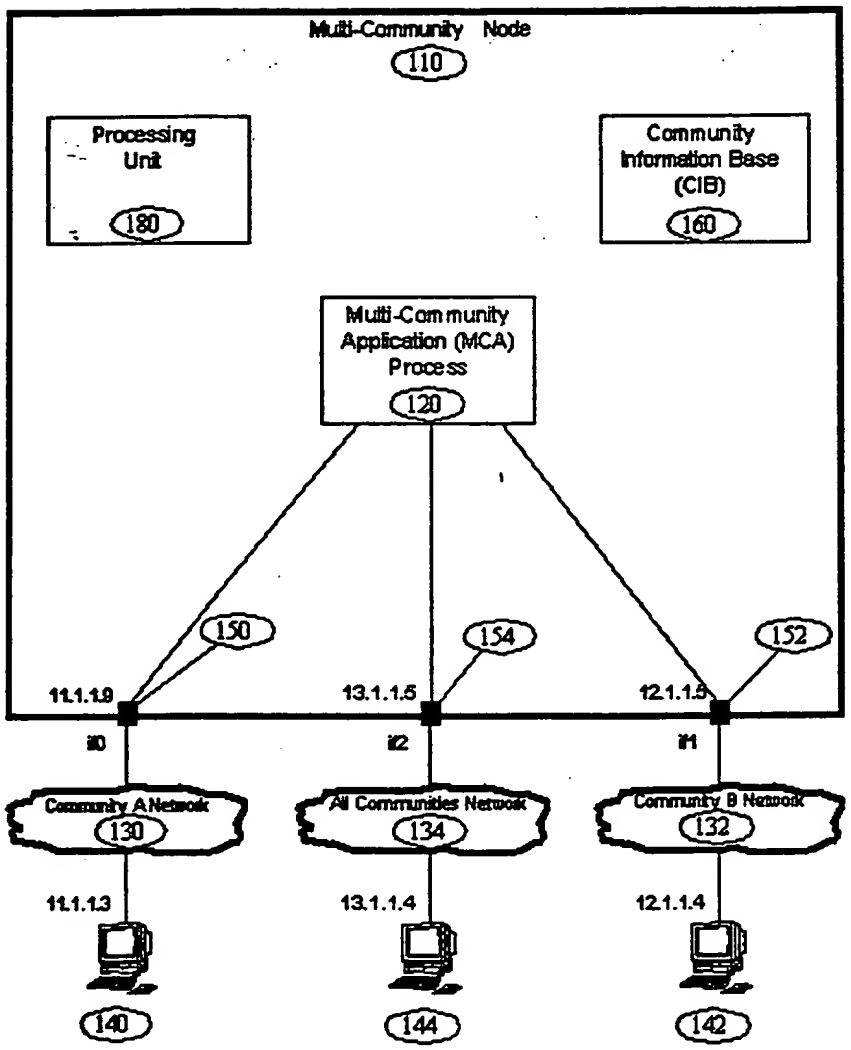

Figure 1

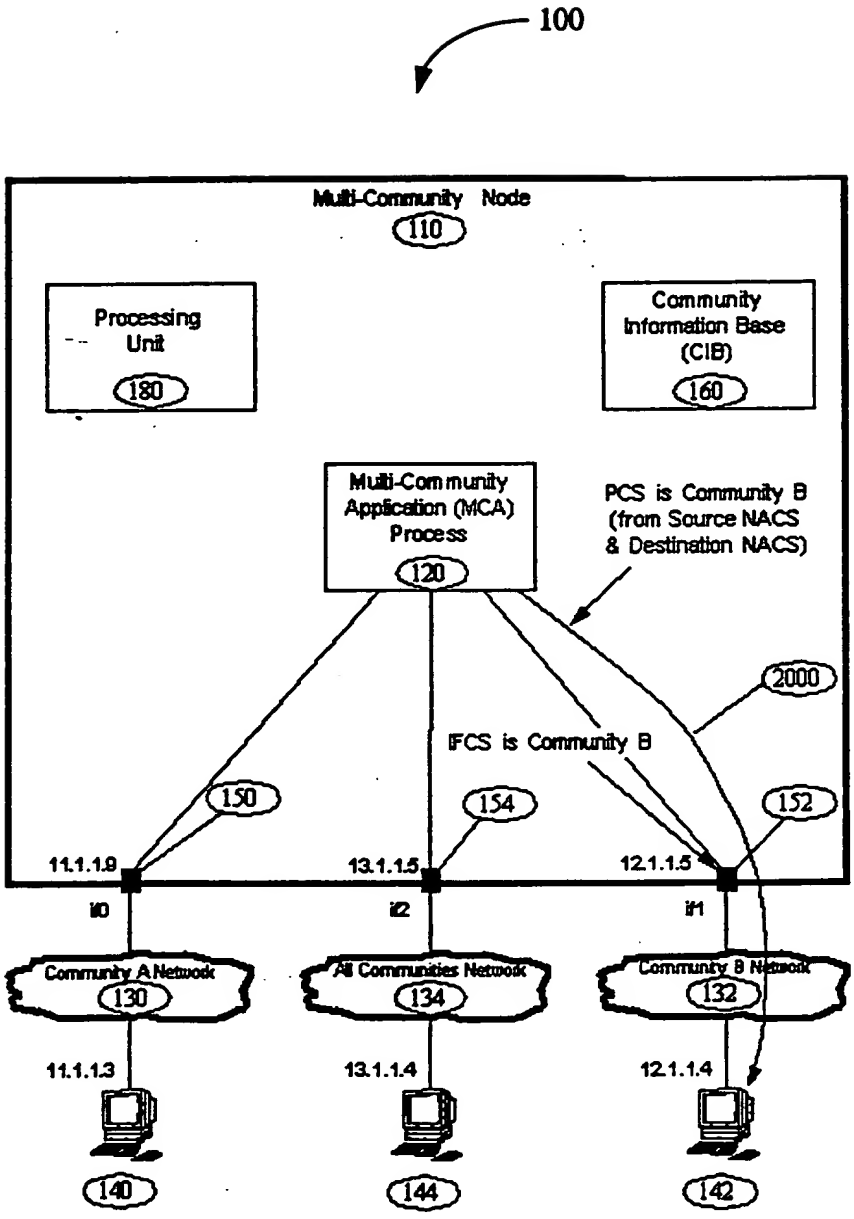
100
Multi-Community Node
110
Processing Unit
180
Community Information Base (CIB)
160
Multi-Community Application (MCA) Process
120
PCS is Community B (from Source NACS & Destination NACS)
2000
IFCS is Community B
150
154
152
11.1.1.9
13.1.1.5
12.1.1.5
i0
i2
i1
Community A Network
130
All Communities Network
134
Community B Network
132
11.1.1.3
13.1.1.4
12.1.1.4
140
144
142

Figure 2

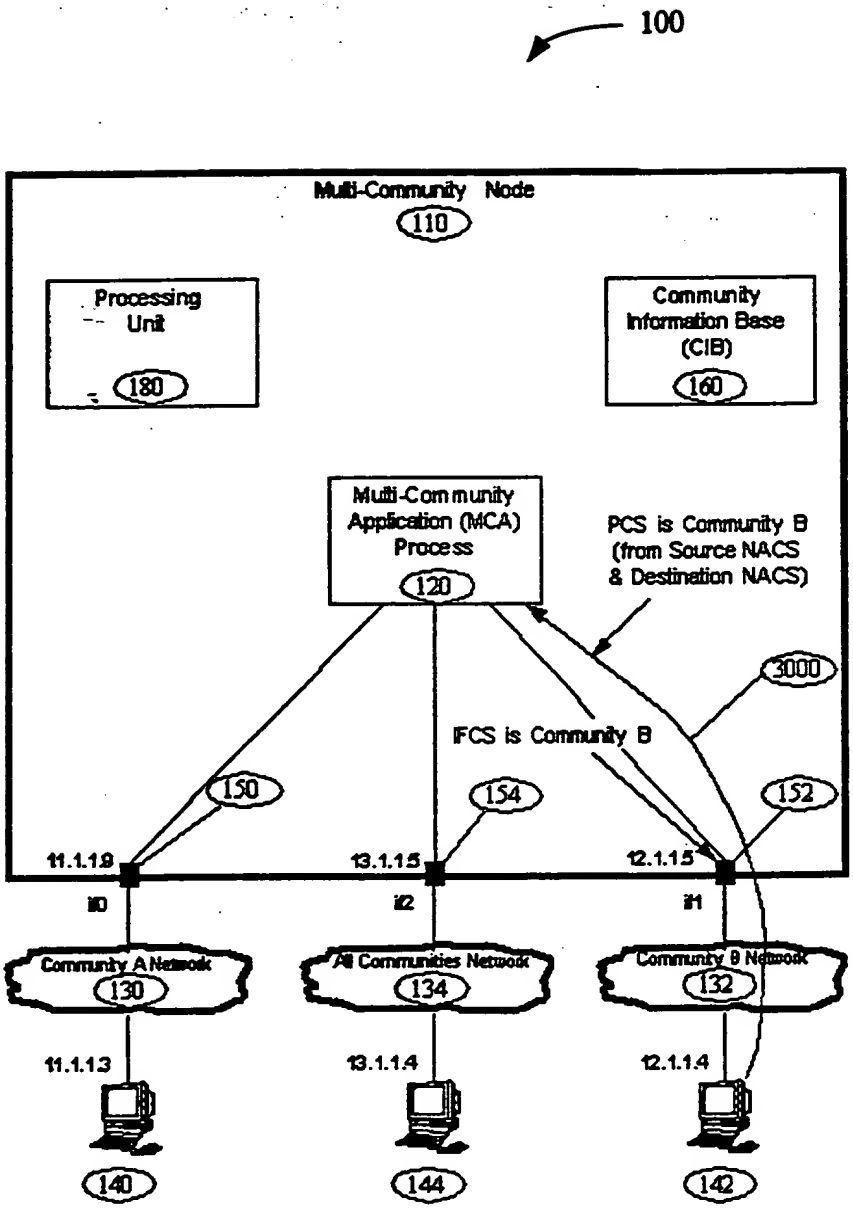
100
Multi-Community Node
110
Processing Unit
180
Community Information Base (CIB)
160
Multi-Community Application (MCA) Process
120
PCS is Community B (from Source NACS & Destination NACS)
3000
IFCS is Community B
150
154
152
11.1.1.9
13.1.1.5
12.1.1.5
i0
i2
i1
Community A Network
130
All Communities Network
134
Community B Network
132
11.1.1.3
13.1.1.4
12.1.1.4
140
144
142

Figure 3

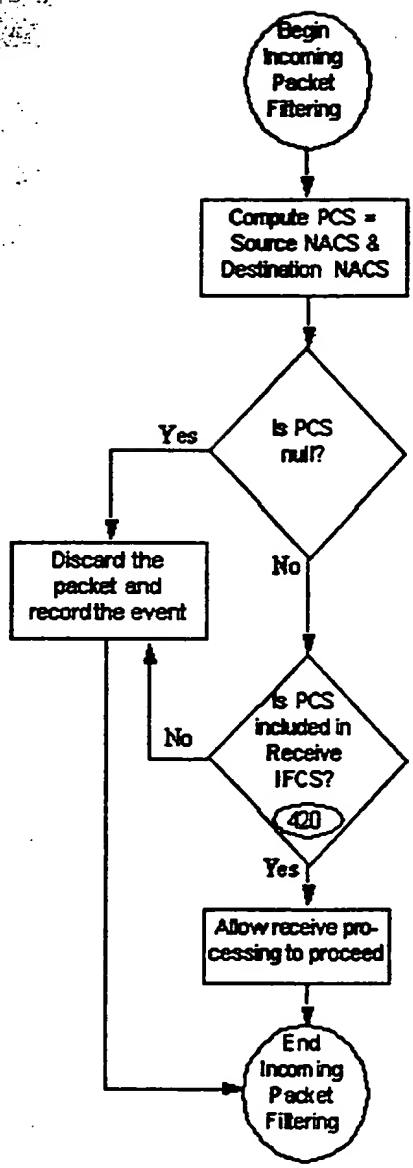
Begin Incoming Packet Filtering
Compute PCS = Source NACS & Destination NACS
Is PCS null?
Yes
No
Discard the packet and record the event
Is PCS included in Receive IFCS?
No
420
Yes
Allow receive processing to proceed
End Incoming Packet Filtering

Figure 4a

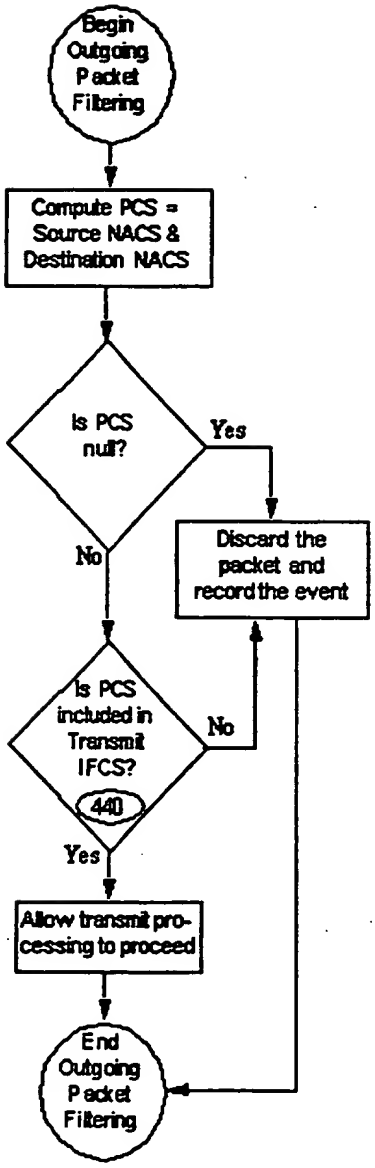
Begin Outgoing Packet Filtering
Compute PCS = Source NACS & Destination NACS
Is PCS null?
Yes
No
Discard the packet and record the event
Is PCS included in Transmit IFCS?
440
No
Yes
Allow transmit processing to proceed
End Outgoing Packet Filtering

Figure 4b

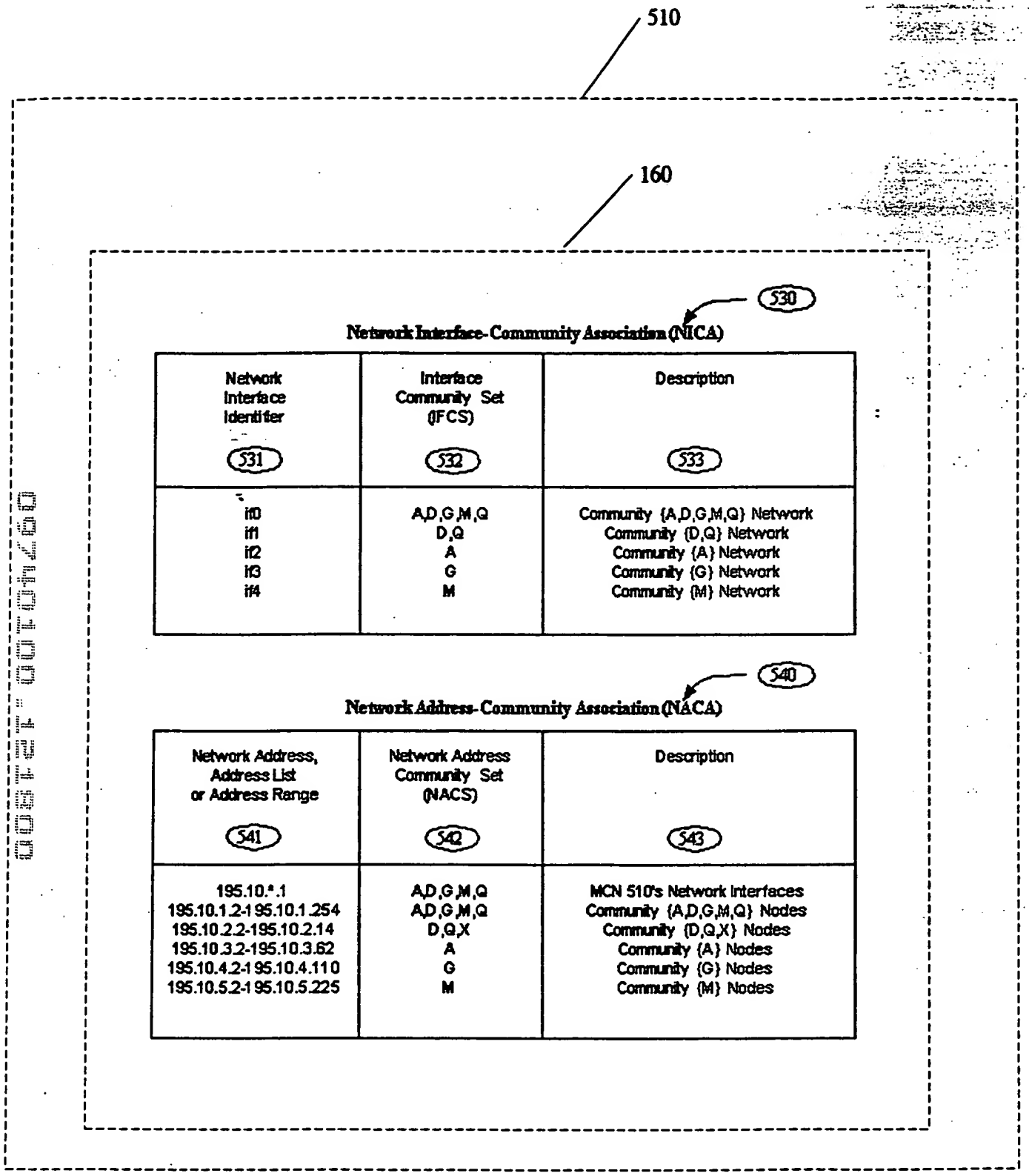
510
160
530
Network Interface-Community Association (NICA)
Network Interface Identifier
531
Interface Community Set (IFCS)
532
Description
533
if0
if1
if2
if3
if4
A,D,G,M,Q
D,Q
A
G
M
Community {A,D,G,M,Q} Network
Community {D,Q} Network
Community {A} Network
Community {G} Network
Community {M} Network
540
Network Address-Community Association (NACA)
Network Address, Address List or Address Range
541
Network Address Community Set (NACS)
542
Description
543
195.10.*.1
195.10.1.2-195.10.1.254
195.10.2.2-195.10.2.14
195.10.3.2-195.10.3.62
195.10.4.2-195.10.4.110
195.10.5.2-195.10.5.225
A,D,G,M,Q
A,D,G,M,Q
D,Q,X
A
G
M
MCN 510's Network Interfaces
Community {A,D,G,M,Q} Nodes
Community {D,Q,X} Nodes
Community {A} Nodes
Community {G} Nodes
Community {M} Nodes

Figure 5

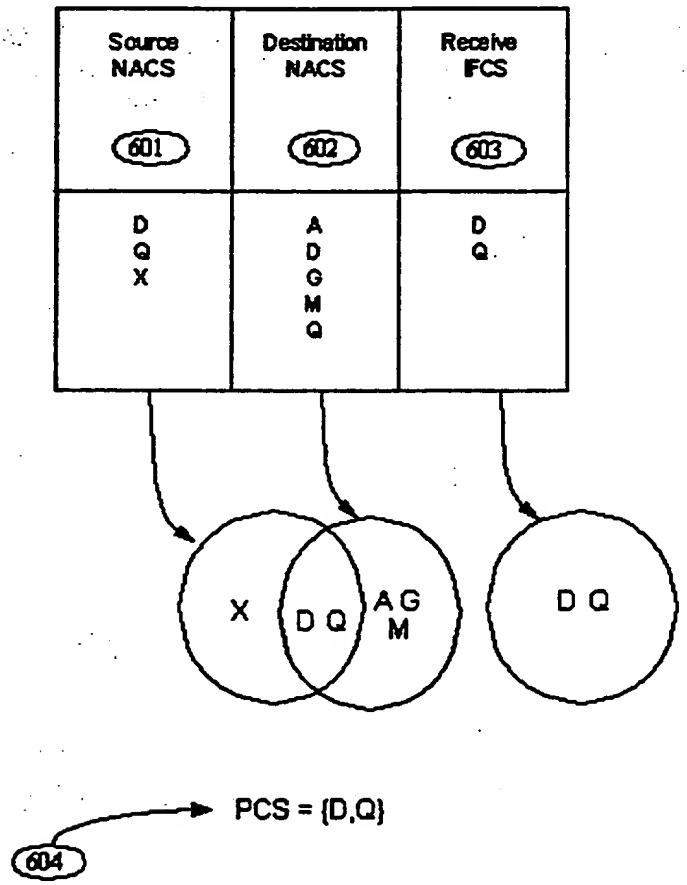
Source NACS
601
Destination NACS
602
Receive IFCS
603
D Q X
A D G M Q
D Q
X
D Q
A G M
D Q
PCS = {D,Q}
604

Figure 6

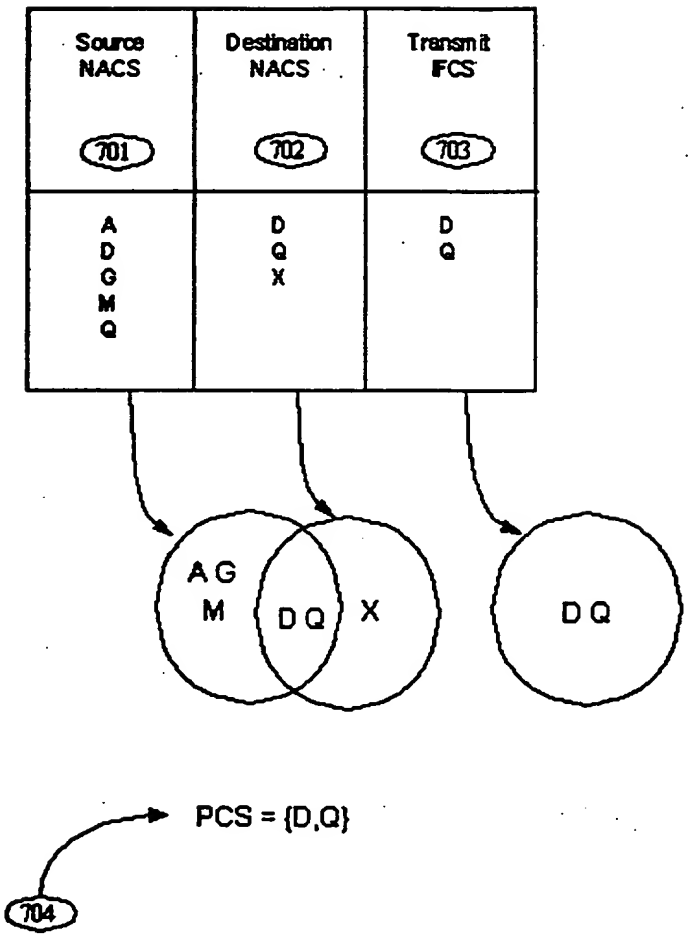
Source NACS
701
Destination NACS
702
Transmit FCS
703
A D G M Q
D Q X
D Q
A G M
D Q
X
D Q
PCS = {D,Q}
704

Figure 7

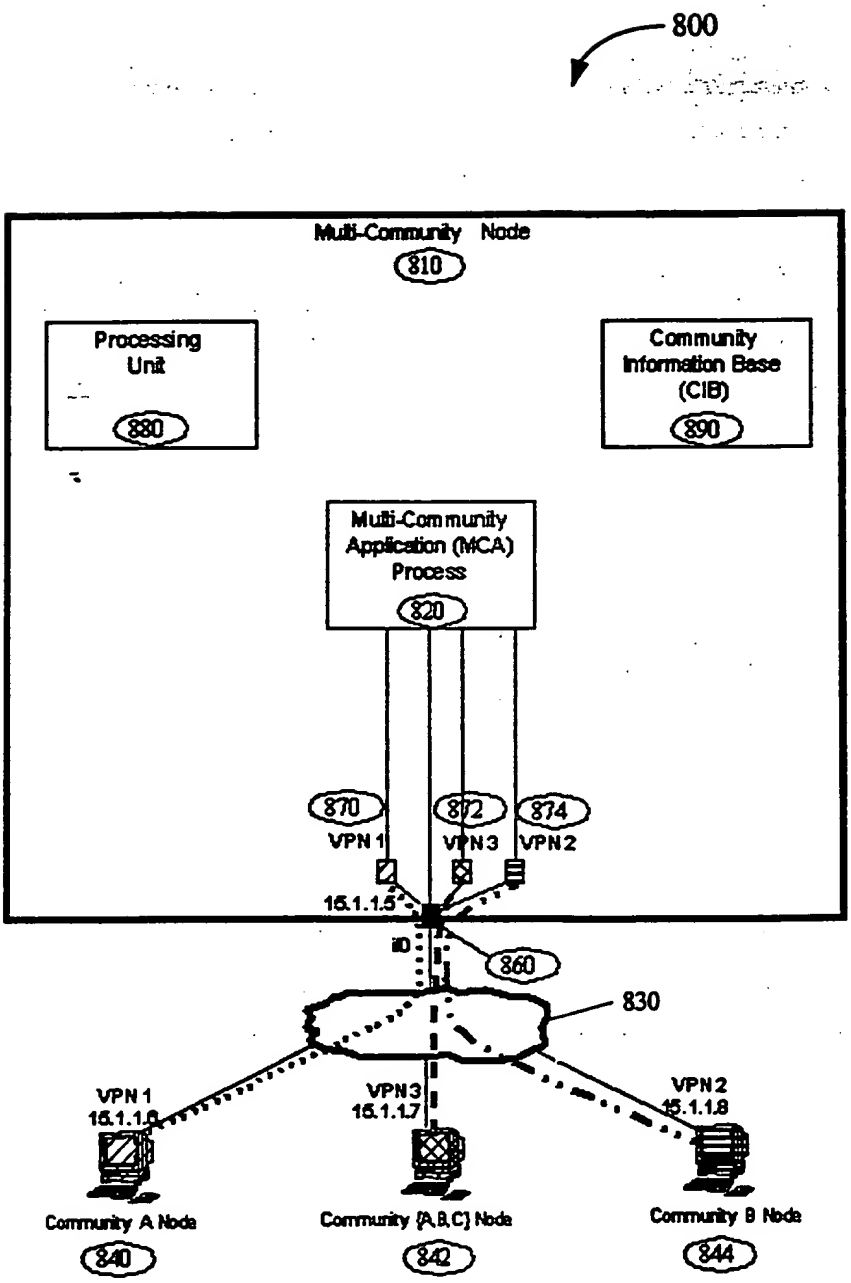
800
Multi-Community Node
810
Processing Unit
880
Community Information Base (CIB)
890
Multi-Community Application (MCA) Process
820
870
872
874
VPN 1
VPN 3
VPN 2
15.1.1.5
860
830
VPN 1
15.1.1.6
VPN 3
15.1.1.7
VPN 2
15.1.1.8
Community A Node
840
Community {A,B,C} Node
842
Community B Node
844

Figure 8

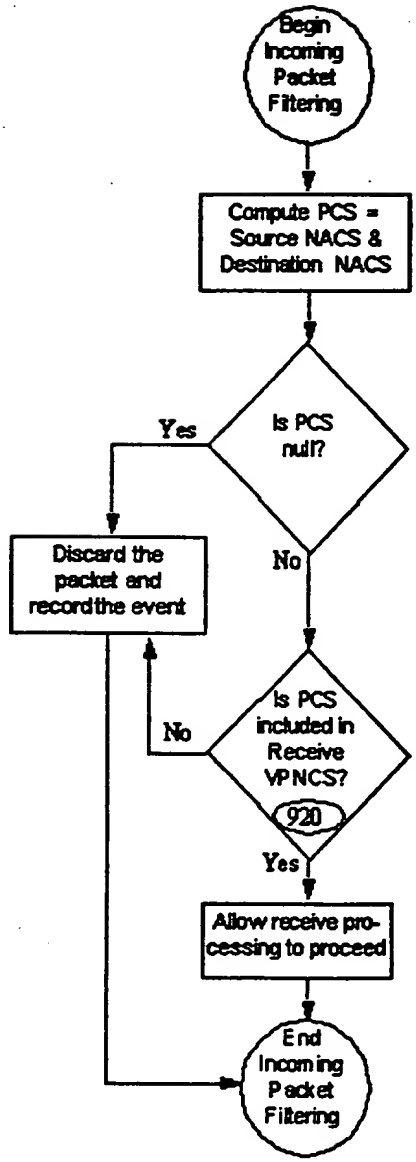
Begin Incoming Packet Filtering
Compute PCS = Source NACS & Destination NACS
Is PCS null?
Yes
No
Discard the packet and record the event
Is PCS included in Receive VPNCS?
920
No
Yes
Allow receive processing to proceed
End Incoming Packet Filtering

Figure 9a

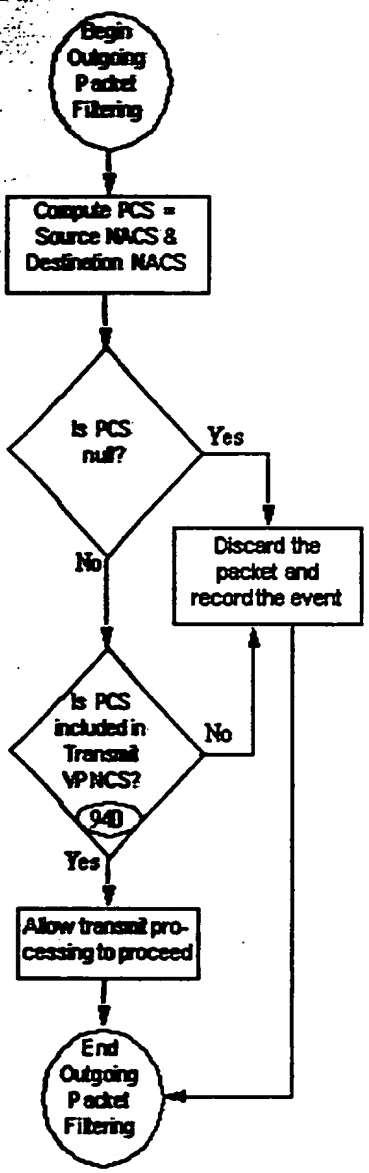
Begin Outgoing Packet Filtering
Compute PCS = Source NACS & Destination NACS
Is PCS null?
Yes
No
Discard the packet and record the event
Is PCS included in Transmit VPNCS?
940
No
Yes
Allow transmit processing to proceed
End Outgoing Packet Filtering

Figure 9b